

Gross Domestic Product by Industry for 1947-1986: New Estimates Based on the North American Industry Classification System

Next week BEA plans to release new estimates of gross domestic product (GDP) by industry for 1947-86 that are based on the 1997 North American Industry Classification System (NAICS). These historical industry estimates fill a major remaining gap among economic time series and they are a significant improvement over the previously-published estimates, which were based on the Standard Industrial Classification (SIC) system. Nominal and real value added estimates are provided for 65 detailed industries for 1977-86 and are provided for 22 industry groups for 1947-76. Estimates of value added components, gross output, and intermediate inputs are not provided.

NAICS improves on the SIC as a classification system because it provides industry detail that allows for a more complete understanding of the services sector's continuing growth as a share of the economy. Real value added by industry estimates that are consistent with BEA's Fisher index measures of real GDP are provided for the first time for years before 1977. Previously, only fixed-weight constant-dollar estimates had been available. The contributions of industry groups such as manufacturing and services to real GDP growth can now be computed more accurately for these earlier periods.

The current-dollar NAICS estimates for 1947-86, like the NAICS estimates for 1987-97, were prepared using extrapolation procedures that rely on revised SIC-based estimates. The NAICS real value added estimates were prepared using a single-deflation method with value-added price indexes that were converted from SIC to NAICS. Because the previously-published estimates before 1977 were based on fixed 1982 relative price weights, they were subject to substitution bias for periods far from the 1982 reference year. Using Fisher aggregation procedures for NAICS industry groups for 1947-76 reduces the impact of the substitution bias for these groups. For example, estimates for manufacturing are not affected by substitution bias to the same degree as are the estimates for detailed manufacturing industries.

The methodology was evaluated for reasonableness and consistency primarily by comparison with other related estimates, including real GDP from the NIPAs. As expected, the share for the goods-producing sector is similar to but slightly lower under NAICS than under the SIC over the entire period, and the converse is true for services. The NAICS-based estimates also show the same long-term decline in goods-producing industries' share of GDP that was seen in the SIC-based estimates. Aggregation of NAICS-based real value added over all industries yields an estimate that very closely approximates BEA's measure of real GDP growth. Manufacturing grew slightly faster over the period compared to the previous SIC estimates, and is comparable to the Bureau of Labor Statistics' measure of manufacturing output for this period.